

# WELCOME TO THE FARMERS FOR SOIL HEALTH 2023: TECHNICAL RESOURCES WEBINAR

## Using GoToWebinar

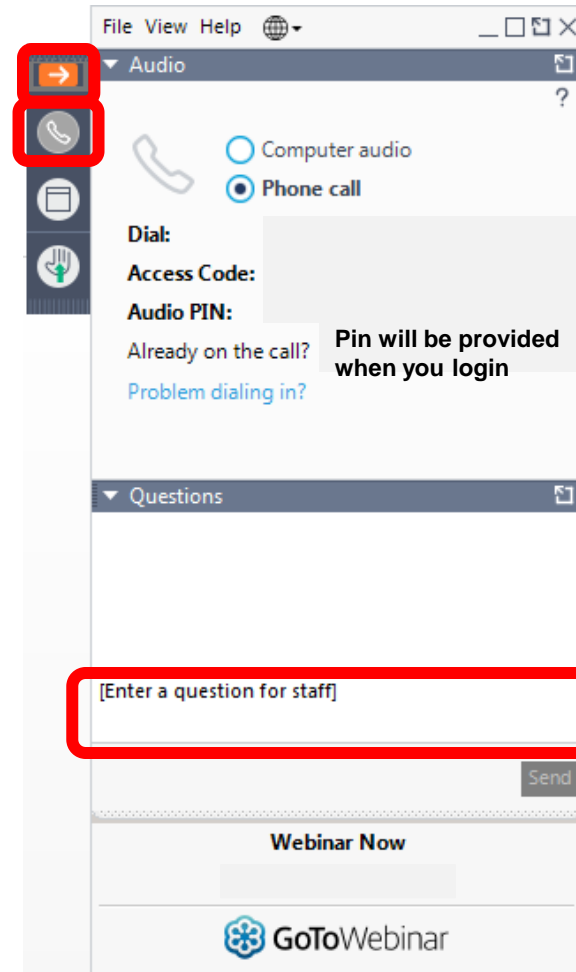
Open and close your control panel

Join audio:

- Choose **Mic & Speakers** to use VoIP
- Choose **Telephone** and dial using the information provided
- Or use Computer audio

Submit questions and comments via the Questions panel

**Note:** Today's presentation is being recorded and will be provided within 48 hours.



We will get started momentarily ...



**Farmers for Soil Health  
2023 Funding Opportunity  
Technical Resources Webinar for Applicants**

Tuesday, January 10, 1 – 3 PM ET

# Webinar Agenda

- Welcome and Introductions
- NFWF Overview
- Farmers for Soil Health Overview
- FSH Technical Resources to support TA Grantees
  - DTN, NCAT, SHI, CRA, NACD
- Timeline
- Q&A

***Webinar is recorded and PDF & FAQ will be available***

# About Us

## Who We Are

- Chartered by Congress in 1984
- Independent 501(c)(3) organization
- 30-member Board appointed by Secretary of the Interior
  - Includes FWS Director and NOAA Administrator

## What We Do

- Sustain, restore and enhance wildlife
- Bring collaboration among federal agencies and private sector

## How We Do It

- Leverage public funding with private money – average 3:1



*Bald eagle*

## NFWF is

- An implementer – we fund projects

## NFWF is not

- An advocacy organization that engages in lobbying or litigation



## Overview: Farmers for Soil Health collaboration

- Collaborative effort among National Pork Board, National Corn Growers Association and United Soybean Board
- Goal to voluntarily expand cover crop adoption on corn and soy fields to 30 million acres by 2030
- Impacts the environmental footprint of corn, soybeans, and pork production because corn and soybeans are the two primary ingredients fed to pigs



## Pending Farmers for Soil Health Climate Smart Commodity Grant

- FSH selected NFWF as a fiscal agent on its CSC proposal
- FSH tentatively selected for a \$95 million award under USDA's Partnerships for Climate Smart Commodities funding opportunity. A funding agreement with USDA has not been finalized.
- Expanding new cover crop adoption on over 1.3 million corn and soybean acres
- Focused in 20 states: DE, IL, IN, IA, KS, KY, MD, MI, MN, MO, NE, NY, NC, ND, OH, PA, SD, TN, VA, or WI.

# Pending Farmers for Soil Health Climate Smart Commodity Grant

- Four main FSH strategies:
  1. Support creation or expansion of state-level TA programs (**see applicant webinar**)

## **Today's Technical Resources webinar will address support for the following:**

2. Financial assistance (guaranteed practice payment, can be stacked):
  - Transition Incentive Payments (TIP) totaling \$50 per new acre of cover crops planted (\$25/acre year 1, \$15/acre year 2, \$10/acre year 3), up to 500 acres per farm, 1.3 million acres total.
  - Signing Incentive Payments (SIP) of \$2 per acre of existing cover crops. Up to 200 acres per farm, 600,000 acres total.
3. Create and launch an enrollment platform as well as a nationwide cover crop Measurement, Reporting and Verification (MRV) system.
4. Create a public marketplace platform to connect farmers to buyers of climate-smart commodities and opportunities for premiums and incentives.

## 2023 FSH TA Grant Activities from the RFP

1. Direct staff resources to help farmers adopt cover crops
2. **Support farmer SIP enrollment**
3. **Support farmer TIP enrollment**
4. **Targeted digital marketing (DTN support)**
5. **Increase SIP and Tip enrollment among Historically Underserved farmers (NCAT support)**
6. **Cover crop training and NRCS practice standards (SHI and CRA support)**
7. **Support farmer eligibility determination, enrollment, and data entry (DTN support)**
8. **Cover crop TA for farmers (SHI and CRA support)**
9. **Provide additional TA as requested**

**Describe your approach to the nine priorities above in the activities section of the proposal narrative**



## 2 & 3. Support farmer SIP and TIP enrollment

- Do not include farmer TIP and SIP costs in your grant proposal budget. NFWF will make the financial assistance payments to participating farmers with other funding separate from the available grant funding.
  - Expected enrollment in your activities narrative
  - Proposal metrics: Acres covered by government agency cost share or financial assistance (this is the number of acres enrolled in FSH).
    - Break out SIP and TIP in metrics notes.
- FSH enrollment/MRV/marketplace platform developed by expected FSH contractor DTN

## **7) Support eligibility determination, enrollment, contracting, MRV tasks; Participate in digital platform trainings**

- In your proposal narrative, describe your approach to supporting enrollment and MRV
- Farmers will self-certify the following in the FSH enrollment platform:
  - USDA farm and tract numbers
  - In compliance with USDA Highly Erodible Land and Wetland Conservation rules
  - They are not receiving USDA payments for planting cover crops on the same acres as their TIP enrollment
  - They are following state NRCS cover crop standards or have an NRCS-approved Environmental Evaluation
- Farmers will complete and sign their enrollment contract in the FSH platform
- DTN satellite and cropland data will be used to confirm for each enrollment:
  - SIP acres were previously planted
  - TIP acres are new cover crop acres
  - TIP cover crop acreage planted each year prior to payment

## 4. Coordinate with DTN on targeted digital marketing

- Targeted digital marketing from DTN in coordination with TA grantees
- FSH has a separate budget for DTN Marcom Products and services to support the 20 FSH states to assist with promotion and enrollment:
  - DTN-provided email and advertising services:
    - Email marketing. Up to 3.2 million total email impressions budgeted for over 3 years
    - Targeted digital ads. Up to 48 million ad impressions budgeted for over 3 years
  - DTN-available products:
    - Data licenses. Up to 455,000 farmer records per year for 3 years
    - User accounts for FarmFocus or FieldVision. Up to 75 users per year for 3 years
- Describe your expected marketing need in #4 of proposal ‘activities’ section
  - Compare your state’s proportional share of the tools and services available (20 state, 3-year totals) to your expected actual need. (See table next slide – will you need more, less, or about right?)
  - Do not budget for this built-in DTN marketing support; do budget for any additional marketing services you propose (other providers or DTN support significantly above your proportional share).

## 4. Coordinate with DTN on targeted digital marketing (cont.)

- Describe your expected marketing need in #4 of proposal 'activities' section
  - Compare your state's proportional share to your actual expected need:

State	# Farmers	% Farmers	# Corn/Soy Acres	FSH Enrollment Goal (Total acres across two signups)	# Farmer Records / 3 Years	# FarmFocus or FieldVison User Accounts / 3 Yrs	# Email Impressions	# Ad Impressions
Iowa	56,000	10.28%	18,500,000	100,000–200,000 acres per state	46,752.29	7	328,807	4,932,110
Illinois	49,000	8.99%	18,100,000		40,908.26	7	287,706	4,315,596
Minnesota	50,000	9.17%	13,300,000		41,743.12	7	293,578	4,403,670
Nebraska	31,000	5.69%	13,100,000		25,880.73	4	182,018	2,730,275
South Dakota	18,000	3.30%	9,500,000	50,000–100,000 acres per state	15,027.52	2	105,688	1,585,321
Indiana	37,000	6.79%	9,500,000		30,889.91	5	217,248	3,258,716
North Dakota	15,000	2.75%	8,800,000		12,522.94	2	88,073	1,321,101
Kansas	26,000	4.77%	8,500,000		21,706.42	4	152,661	2,289,908
Missouri	29,000	5.32%	7,700,000		24,211.01	4	170,275	2,554,128
Ohio	39,000	7.16%	7,400,000		32,559.63	5	228,991	3,434,862
Wisconsin	39,000	7.16%	4,600,000	25,000–50,000 acres per state	32,559.63	5	228,991	3,434,862
Michigan	48,000	8.81%	3,500,000		40,073.39	7	281,835	4,227,523
Kentucky	21,000	3.85%	2,700,000		17,532.11	3	123,303	1,849,541
North Carolina	21,000	3.85%	2,500,000		17,532.11	3	123,303	1,849,541
Tennessee	14,000	2.57%	2,200,000		11,688.07	2	82,202	1,233,028
Pennsylvania	23,000	4.22%	1,700,000		19,201.83	3	135,046	2,025,688
New York	12,000	2.20%	1,300,000	5,000–25,000 acres per state	10,018.35	2	70,459	1,056,881
Virginia	10,000	1.83%	1,100,000		8,348.62	1	58,716	880,734
Maryland	5,000	0.92%	900,000		4,174.31	1	29,358	440,367
Delaware	2,000	0.37%	300,000		1,669.72	1	11,743	176,147
<b>Total</b>	<b>545,000</b>	<b>100.00%</b>	<b>135,200,000</b>		<b>1,365,000</b>	<b>455,000</b>	<b>75</b>	<b>3,200,000</b>

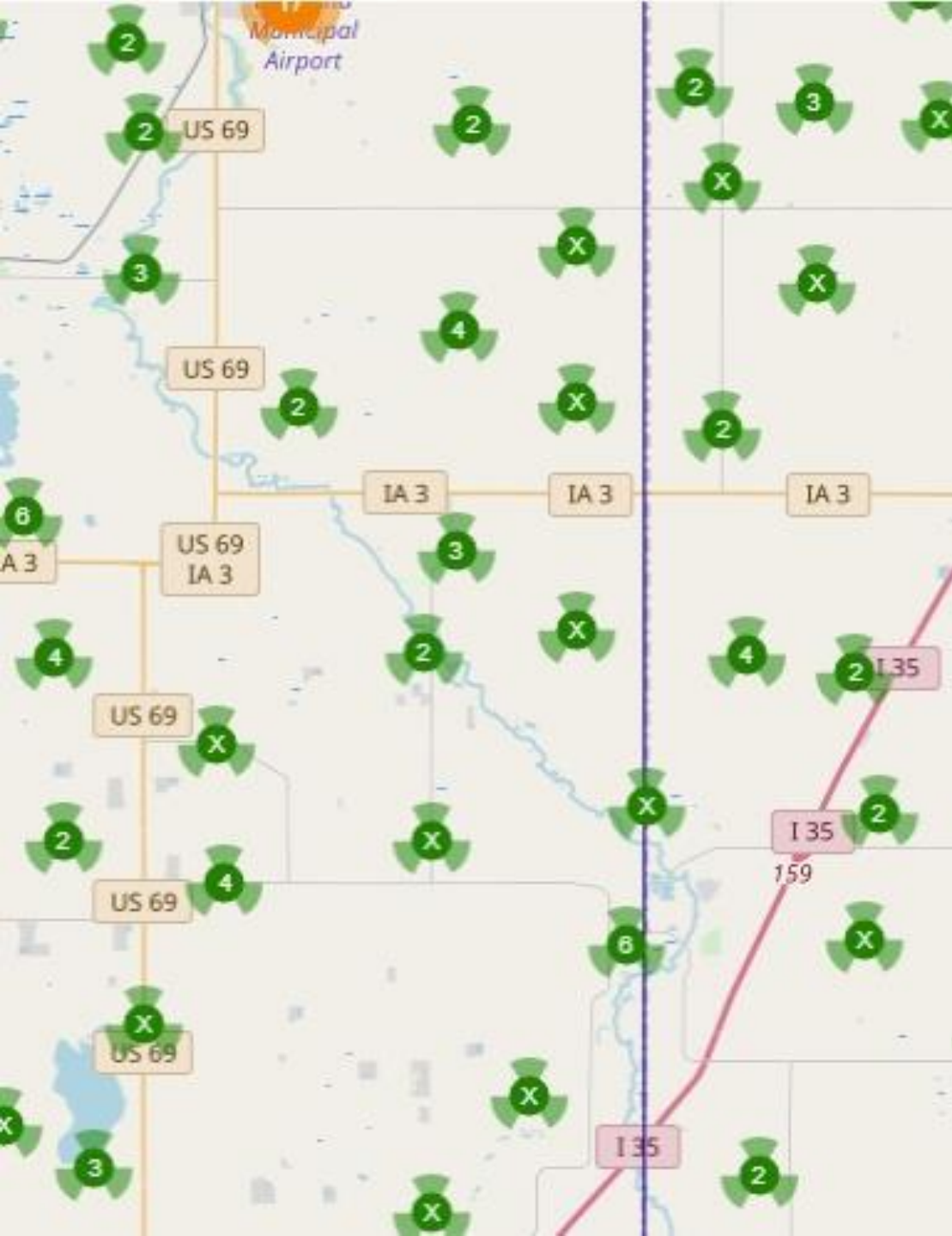
These are illustrative proportional allocations based on the # of farmers in each state. The actual allocations will be determined by FSH Marcom advisory group and informed by input in your grant proposal submissions

# DTN<sup>o</sup>



FARM MARKET iD<sup>o</sup>

## Company & Product Overview



Our **data-powered** products and services help inform and drive your **strategy, marketing** and **sales** decisions.

# The Competitive Edge

DATA

**Strategy**

View your ideal  
market

**Marketing**

Focus your  
audience

**Sales**

Sell who you  
market to



Over **4 billion**  
pixels of satellite data



Over **1 billion**  
acres of land analyzed



Over **32 million**  
geospatial field  
boundaries



Over **4,800,000**  
farm owners and  
operators



Over **200**  
farm demographics  
(crop & livestock, Gross  
Farm Income, etc.)



# Data Coverage

95 septillion	Over 300 Million Acres
Datapoints analyzed annually to produce a land-sourced, fact-based database (that's 95 with 24 zeros after it!)	Over 95% Coverage of Row Crop Acres Connected to the Farm Owners and Operators

## Farm and Farmographics Data

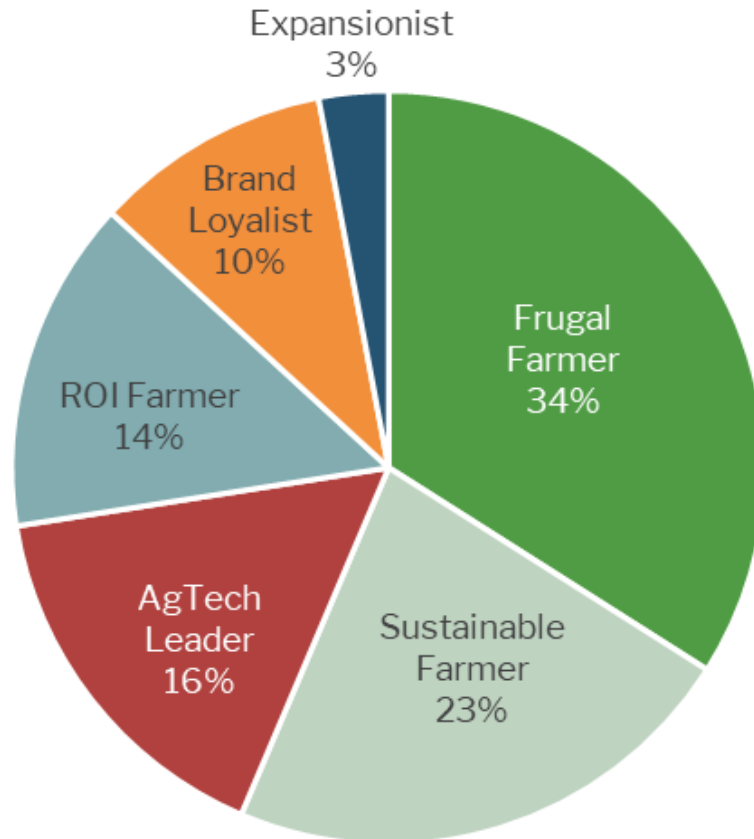
- Comprehensive contact information including email
- Consumer Demographic (Age, Education, Gender, Ethnicity, etc.)
- Farmer Personas
- On-Farm Grain Storage
- Irrigation Practices
- Farm Field Boundaries
- Crop/Acres
- Gross Farm Income
- Relationships (Entities, Landlord, Etc)
- Sustainability Data (Cover Crop, Tillage, Avg/Typical Farm Practice, Input Use, estimated Carbon emissions)
- Grain Elevator/Ethanol/Feedlot/Crush Plant Locations

# The result?

- **More records.** We have 2.5 million active farm operators, owners and related growers. Connected to over 24 million CLUs
- **More current.** We update all our records annually through a combination of public and private sources.
- **More accurate.** We collect our data through reliable governmental sources, using them to update our proprietary database of field boundaries. We're the only data source that can account for overlapping acres and distinctions between land owned vs. operated.
- **More detailed.** We have field-level detail with specific coverage at  $\frac{1}{4}$  acre increments within the farm field.

# Breakdown of personas from predictive modeling

**Breakdown of Farmers by Persona**



- Percentage of predicted Farmer Personas
- 51% of farmers' primary concern is the bottom line (Frugal, ROI, and Expansionist)
- AgTech adoption represents a small minority of the market (16%)
- $\frac{1}{4}$  of all farmers predicted to be sustainable



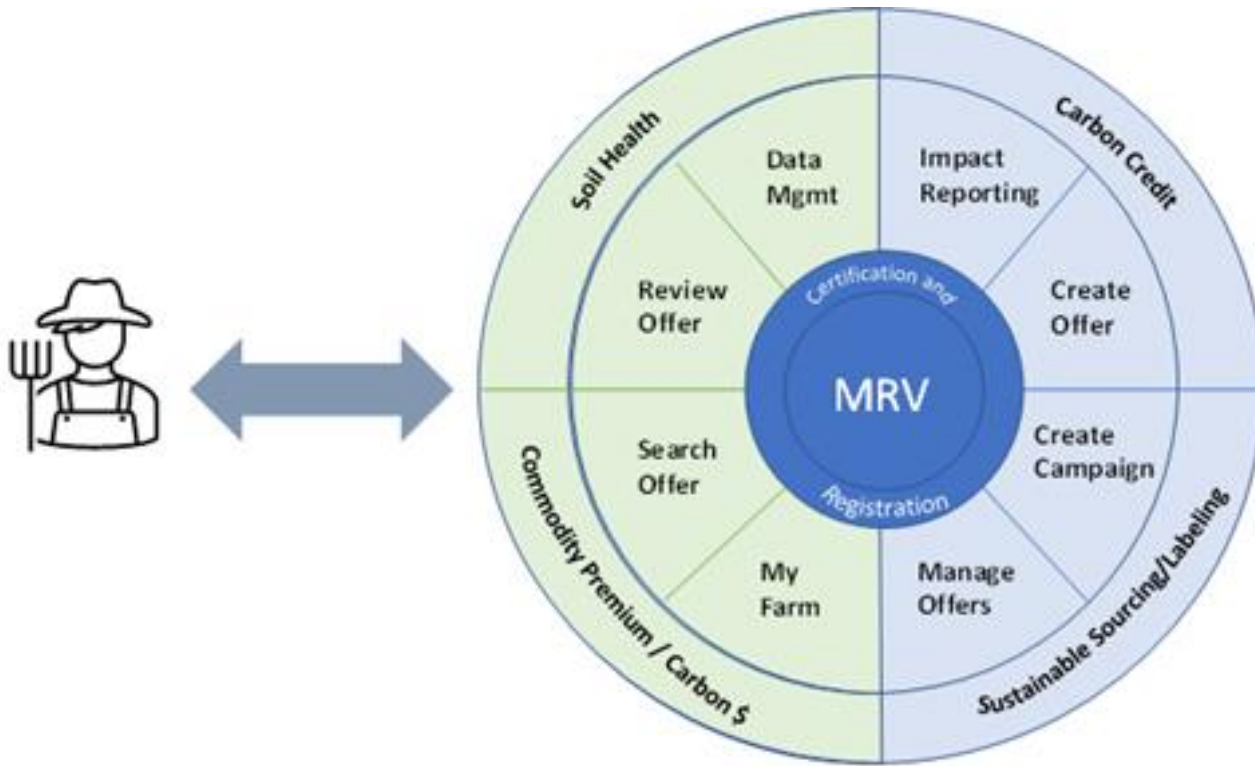
# **FSH ENROLLMENT & MRV AND SUSTAINABILITY MARKETPLACE**

# Overview of the Sustainability Marketplace

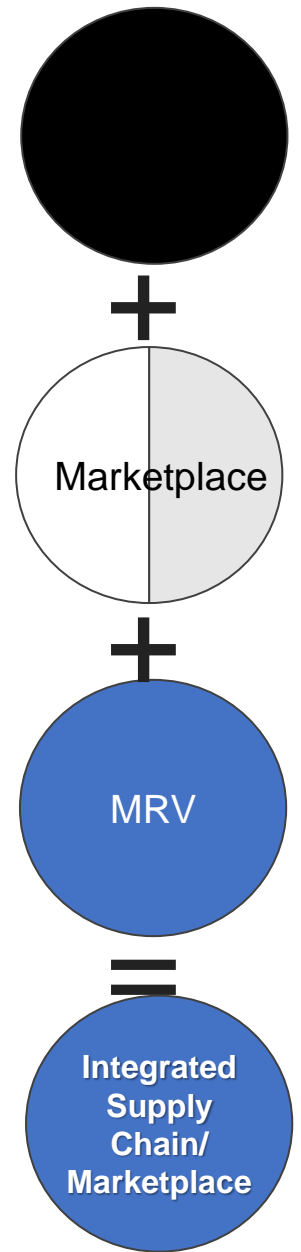
- A key objective of the USDA's Climate-Smart grants was stimulating private market opportunities for farmers
- We are building an integrated platform to provide a marketplace for companies to extend offers climate-smart offers to farmers and farmer to market their climate-smart commodities
- A key focus on this platform is to use data, data science and technology to make accessing and participating in these opportunities as easy as possible and lower the burden on farmers in data and record keeping
- Farmers that enroll in the marketplace will have access to various market opportunities above and beyond FSH and will be able to leverage DTN's existing databases, passive MRV data collection, various resources and utilize DTN tools to control, protect and manage their data
- State Commodity Groups may be interested in using this platform with potential marketplace opportunities that have come to them
- Farmers can “take the data with them” and access carbon calculations in the platform to market and promote their crops
- Farmers will be able to invite users/contributors (e.g., state commodity groups) to “My Farm” enter data. Collaborate and will have the ability to pull data from other 3<sup>rd</sup> party systems like Climate/FieldView, JD, etc.

# Grain/Commodity Marketplace

**Supply**

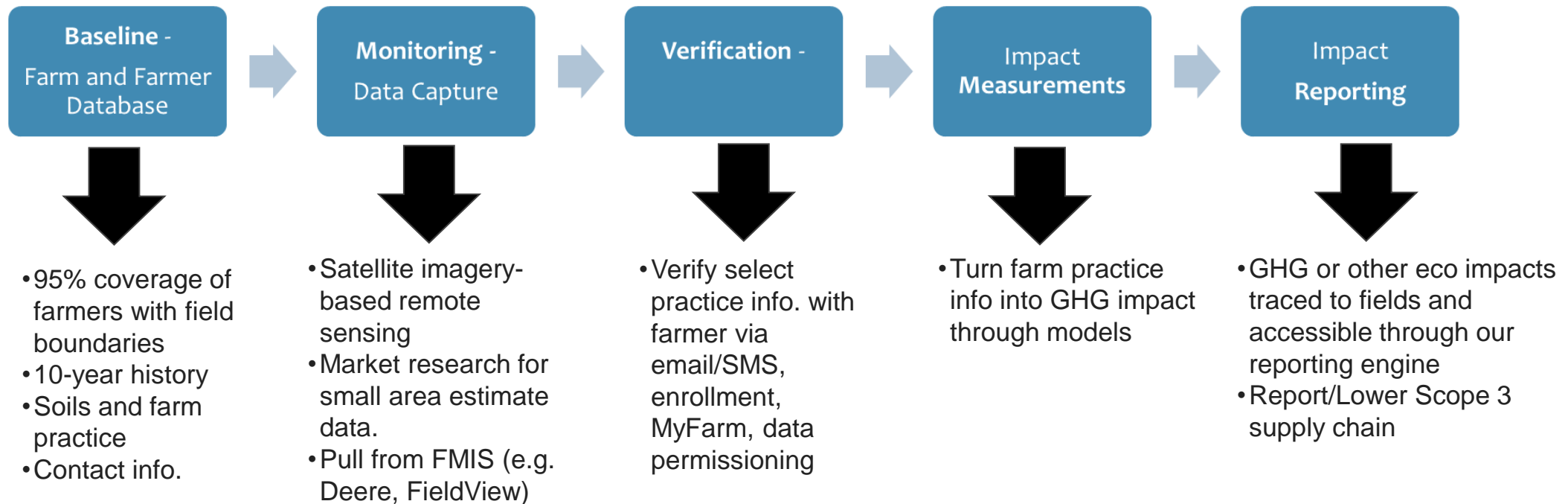


**Demand**



# Measurement, Reporting, and Verification (MRV)

MRV reduces friction, increases transparency, minimizes cost and makes strategic sourcing possible at scale.



# Sustainability Marketplace

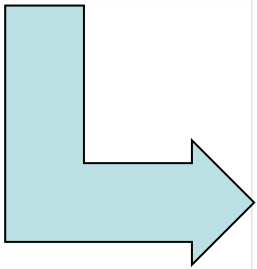
- Some Example /Illustrative Screens:

**Log in to your account**  
Not a member yet? [Get started free now!](#)

Email address

Password

Remember me [Forgot password](#)



DTN<sup>®</sup> Climate Smart Commodity Marketplace

My Farm

Search Offers

Add User

Resources

My Offers

Data Analytics

Data Management

DTN<sup>®</sup> Climate Smart Commodity Marketplace

Home > My Farm

### Smith Farms

+ Add Field

FARM TOTALS	TOTAL OFFERS	ACRES	FIELDS	ECO SCORE	TOTAL REVENUE	AVERAGE PER ACRE	CROP MIX
Smith Farms The Village, MO	3	694	34	58	\$8,923	\$12.96	Corn, Wheat, Soybean

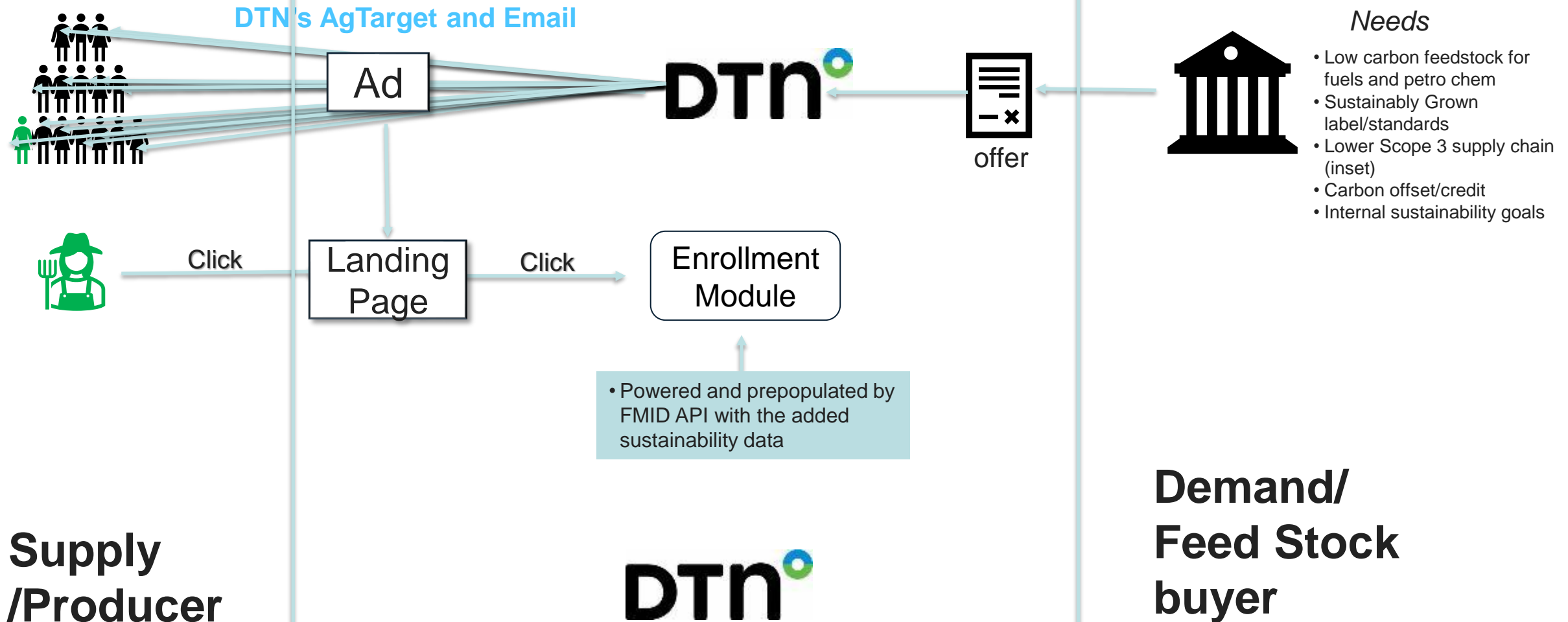
NAME	ACRES	OFFER	VERIFY
Field 1 The Village, MO	21	Adler's...Corn	
Field 2 The Village, MO	18	ABC...Carbon Credit	
Field 3 The Village, MO	19	Chesson...Renewable	
Field 4 The Village, MO	8		
Field 34 The Village, MO	21		

#### Field 1

YEAR	COMPANY	OFFER INCENTIVES	TOTAL ACRES	CROP	ECO SCORE	STATUS	TYPE	OFFER NUMBER	VIEW DATA
2022	Kellogg's	\$15/acre/year	21	Corn	54	Enrolled	Sustainable	13453	
2021	Kellogg's	\$15/acre/year	21	Corn	51	Verified	Sustainable	282642	
2020	Kellogg's	\$15/acre/year	21	Corn	50	Paid	Sustainable	8333	



# Enrollment Process



The background is a dark blue color with a complex network diagram overlaid. The diagram consists of numerous small dots (nodes) connected by thin lines, forming a web-like structure. Some nodes are highlighted in a light yellow or green color. The network is composed of various geometric shapes, including squares, rectangles, and circles, which are interconnected. The overall appearance is that of a technical or data-related visualization.

# MARCOM SOLUTIONS

# FSH Marcom

- FSH will have a Marcom advisory team composed of members of The Pork Board, NCGA, USB, DTN and FSH partners
- Compare your state's proportional share of the tools and services available (20 state, 3-year totals) to your expected actual need.
  - Do not budget for the built-in DTN marketing support; do budget for any additional marketing services you propose (other providers or DTN support significantly above your proportional share).

# FSH Marcom: DTN Provided Services

- Digital campaign plan will include ~48 million highly targeted digital and social ad impressions across a 20-state footprint
  - This plan will be coordinated with the states to ensure consistency
  - The ads will be linked to a landing page being hosted on the FSH website which will provide a summary of the FSH cover crop program and provide the farmer the opportunity to “subscribe”, complete a “contact me” form and/or “enroll”
    - Selecting enrollment would direct them the Sustainability Marketplace site developed and managed by DTN
- DTN/ advisory team will also do periodic email campaigns to inform and drive signups

# FSH Marcom: DTN (FMiD) Provided Data and Tools

- Farmer records available to states:
  - Up to 455,000 annual data licenses for 3 years
- FarmFocus or FieldVision user accounts available to states:
  - Up to 75 annual user accounts for 3 years

# AgTarget

With the rich content properties of DTN, paired with our unmatched Farm Market data, allow you to fuel 100% data-driven campaigns that get your ads in front of your target audiences at the right time and right place through our supported solutions.

*Progressive*  
**FARMER**  
powered by **DTN**



- Display
- Native
- Video
- YouTube
- CTV
- Streaming audio
- Social
- Search
- Discovery
- Geo/demo fence
- Ag retailers
- Persona targeting

# Why DTNPF and FMID Digital Data Solutions offer more value

## DATA MATTERS

Reach the right person, at the right time, in the right place with Ag's most comprehensive farmer database provided by FMID.

- 200+ data points cover 98% of US farm operations
- 1st party persona targeting and custom modeling

## CUSTOMER SERVICE MATTERS

Our first-class advertising operations team ensures KPIs are met, campaigns are fulfilled, and expectations are exceeded.

- Service requests provided in 24 hours or less
- Automated performance dashboards
- Dedicated ad ops specific to your campaign

## DELIVERY MATTERS

- Data-driven programmatic delivering across multiple channels including display, native, video, audio, CTV and paid social.
- Geo-fencing with demo overlay and customer audience targeting
- Scale and frequency considerations to ensure your message is seen and consumed while protecting your marketing dollars

## SECURITY MATTERS

LiveRamp delivers anonymous digital audiences to ensure your customer's data is protected.



# Audiences

Data-driven digital audiences 8.2M records

Covering 98% of all U.S. farmers

276,000 print subscribers

58,806 social media followers

800,000 e-blast subs

78,000 e-newsletters subs

300,000+ Monthly, unique visitors to  
dtn.com and paid subscribers' sites





# 2023 HIGH VALUE EDITORIAL CALENDAR

Every issue of *Progressive Farmer* contains the latest information on technology, precision ag, machinery; as well as soil health, conservation, and sustainability.

**Jan:** Financial Barometer for 2023

**Feb:** The Art of Planting / Planting Primer

**Mar:** World of Wheat & National Wheat Yield Contest

**Apr:** The Future of Food

**May:** Beef Outlook

**Summer:** Under The Canopy

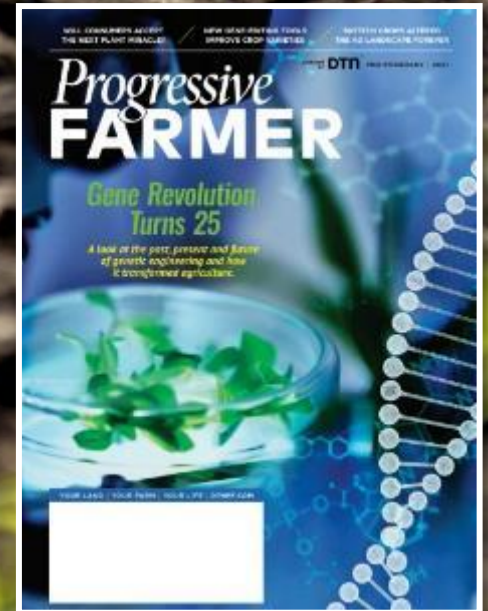
**Aug:** When Your Family Doesn't Want To Farm - Next Gen.

**Sept:** Seed Emphasis Issue

**Oct:** This Isn't Your Father's Dealership - Farm Equipment

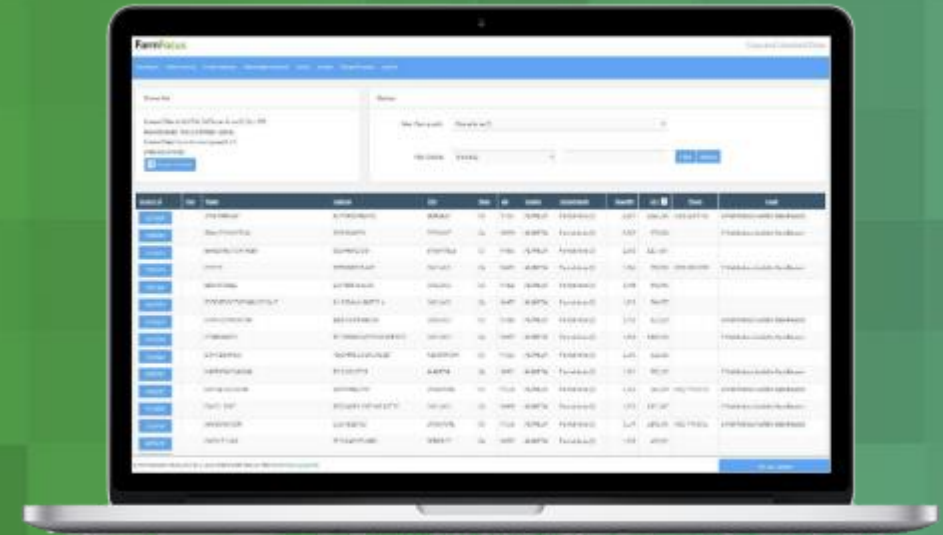
**Nov:** Indispensable Drones

**Dec:** America's Best Young Farmers and Ranchers



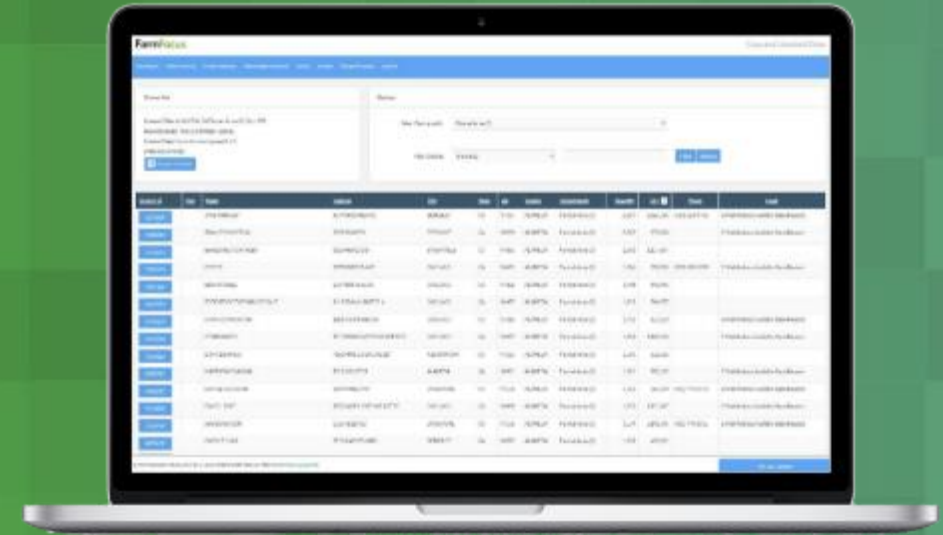
# FARM FOCUS®

- ❑ Integrate marketing efforts with your sales efforts and vice versa
- ❑ See complete and accurate contact information including addresses, phone and email addresses
- ❑ View summaries of their farm operations to provide detail on acres, crops, livestock, gross farm income
- ❑ Develop targeted segments
- ❑ Print/Share/Export



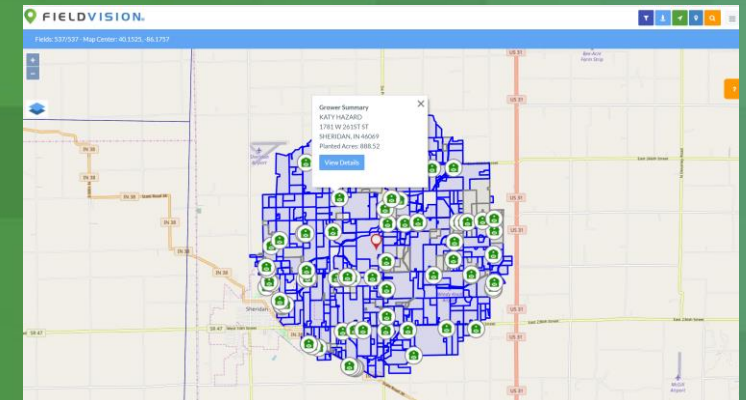
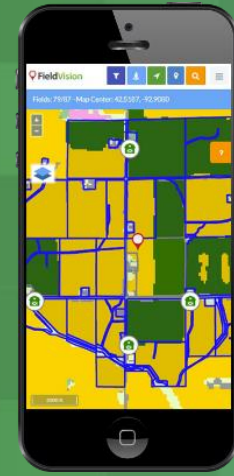
# (Cont.)

- ❑ Interact with maps featuring field boundaries of their farm fields for over 300 million acres of crops
- ❑ Interact with the data through a user-friendly interface, complete with mapping, charts, graphs and search



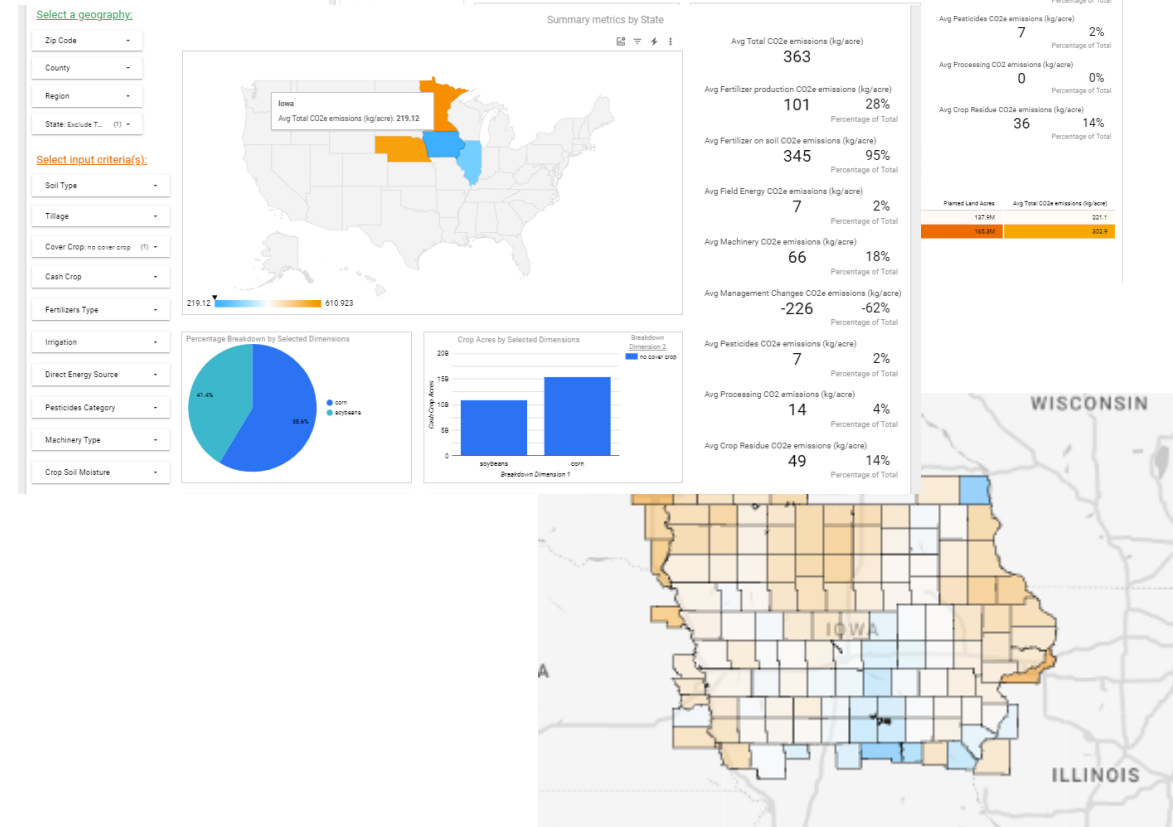
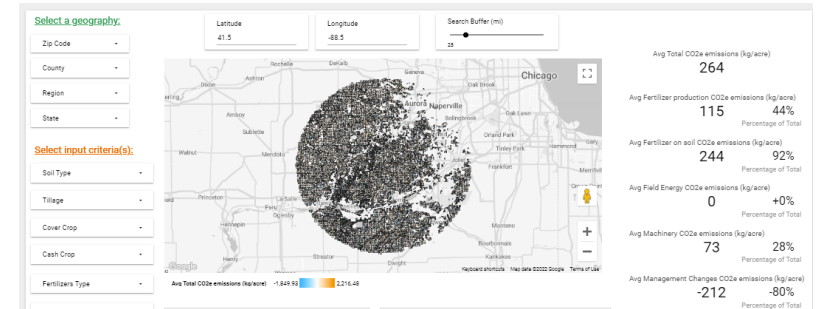


- GPS powered Location-based access to the data your boots on the ground need
- Data on all farm fields and growers displayed based on current or chosen location
- Search for specific growers
- Filter views (size of farmer, field, GFI) to highlight/target
- Access to GrowerProfile
- Mobile-responsive and accessible on all devices





- Create interactive dashboards to view all your high-level data
- Filter selections on the dashboard
- Drill down into the data for deeper insights
- Visualize data through charts, graphs and more
- Find unique address, phone and email counts for all growers in your selected segments
- And much more



State	Growers	Addresses	Crop Acres	Planted Land Acres	Avg Total CO2e emissions (kg/acre)
Illinois	22.1K	21.1K	1.2M	1.2M	314.6
Minnesota	12.5K	12.1K	657.5K	725K	676.6
Iowa	9.9K	9.7K	407.2K	440.2K	221.4
Nebraska	5.5K	5.4K	403.7K	443.8K	635.9

## 5. Increase HU Farmer SIP and TIP enrollment

FSH is prioritizing 20% of the FA for Historically Underserved and small producers

USDA Historically Underserved farmer and rancher categories:

- Those with limited resources
- Beginning farmers/ranchers
- Socially disadvantaged
- Women farmers

Describe outreach strategy in the Activities section and the Community Impact section. Describe demographics in the Community Impact section.

Farmer demographics available in NASS state data:

[https://www.nass.usda.gov/Publications/AgCensus/2017/Full\\_Report/Census\\_by\\_State/index.php](https://www.nass.usda.gov/Publications/AgCensus/2017/Full_Report/Census_by_State/index.php)

# About NCAT



## TRUSTED

Since 1976 NCAT has provided relevant information, individualized technical assistance and in-depth resources to support sustainable agriculture and accessible energy solutions.



## PRACTICAL

NCAT's trusted knowledgebase provides scalable solutions to strengthen self-reliance, reduce poverty, and protect natural resources. NCAT is all solutions, not sensation.



## CONNECTOR

NCAT facilitates meaningful connections among sustainable agriculture producers, renewable energy experts, innovators, researchers, and industry professionals. Our role as a connector results in valuable networks and lasting change.

# About NCAT

- **Core focus areas:** sustainable agriculture, renewable energy
- **Key programs include:** ATTRA, Armed to Farm, AgriSolar Clearinghouse, LIHEAP Clearinghouse, and Soil for Water
- Specialists located across **11 states** to serve the entire country
- NCAT's sustainable agriculture specialists provide trusted, practical multimedia resources to nearly **35,000 farmers each year**. NCAT's ATTRA Sustainable Agriculture website is accessed more than **one million times** each year.





# Communications Support for Farmer Outreach

- **Informational Flyer** to help states/organizations reach underserved farmers, ranchers, and land managers
- **Educational Webinar** for states/organizations led by two NCAT agricultural specialists and farmers on how to engage underserved farmers
- **Targeted Technical Assistance** for states/organizations available



## **6) Participate in cover crop training, distribute educational materials, NRCS practice standards**

## **8) Cover crop TA over 3-year TIP agreements**

- Trainings, workshops, videos and other technical resources will be generated by FSH partners Soil Health Institute and the Center for Regenerative Agriculture at the University of Missouri
- FSH TIP will generally follow state NRCS conservation practice standard 340 - cover crops
- Provide TA as farmers plan, plant, terminate cover crops over the 3-year agreements
- In the activities section of your proposal narrative, describe your need for workshops or tailored materials, but do not include the SHI or CRA services in your proposal budget.



# CENTER FOR REGENERATIVE AGRICULTURE

**Regenerating the health of our soils  
while building increased resiliency for  
farms and food production**

[cra.missouri.edu](http://cra.missouri.edu)

The Center for Regenerative Agriculture at University of Missouri serves a key information resource on regenerative farming, with a particular emphasis on cover crops, including:

- Educational materials
  - Bulletins, fact sheets, reports on cover crops
  - Farmer videos on cover crops
- Training programs for both farmers and farm advisors on cover crop selection and management
- Research results from integrated projects on cover crops, including analysis of cover crop economics
- Statistics on cover crops, including from the National SARE/CTIC Cover Crop Survey

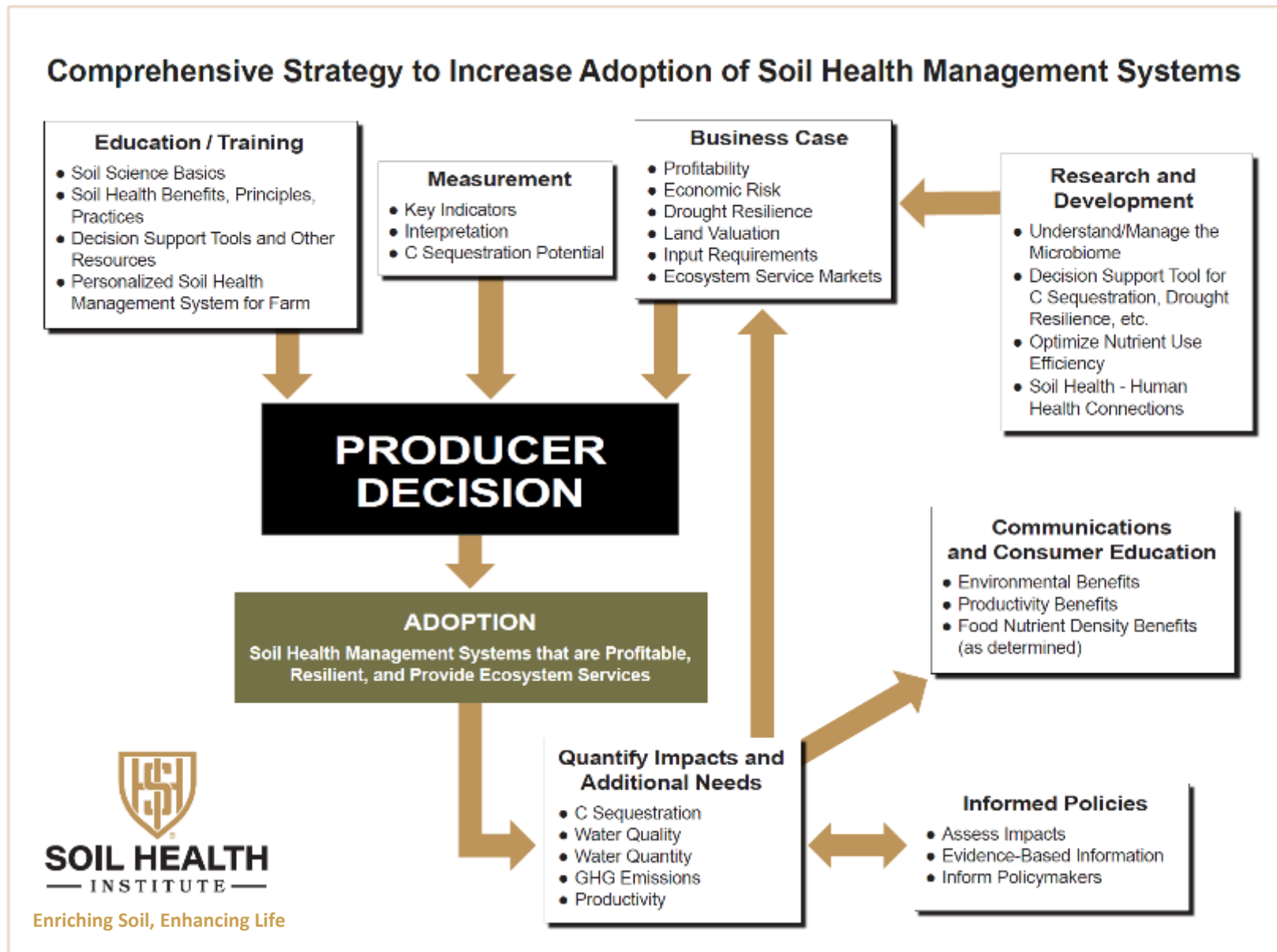


## Meet the Soil Health Institute

The Soil Health Institute (SHI) is a global nonprofit with a mission to safeguard and enhance the vitality and productivity of soil through scientific research and advancement.

Our scientific team holds doctorates in various soil science and related disciplines, including:

- Carbon and nutrient cycling,
- Soil physics,
- Soil microbiology,
- Farmer/adviser education,
- Soil-plant interactions,
- Biophysical and statistical modeling,
- Agricultural economics



SHI works with many partners to conduct and translate soil health science into action that benefits farmers, the environment, and society.

## Business Case

- Discovered that net income increased for 85% of farmers growing corn and 88% of farmers growing soybean with regenerative soil health systems across 100 farms and 9 states.



## Education

- Provided virtual and in-person soil health education programs to over 17,000 growers and their advisers



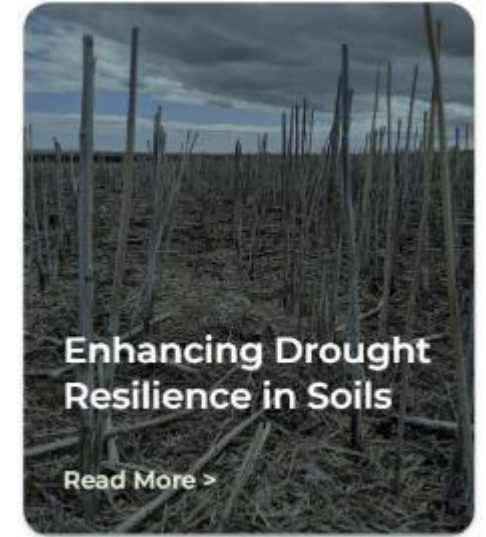
## Measurement

- Evaluated over 30 soil health indicators at 124 long-term agricultural research sites where conventional systems were compared with regenerative soil health systems.



## Research

- Integrated new equations into USDA's COMET-Farm tool that provides farmers, consultants, and scientists with predictions of how soil health practices increase drought resilience.



<https://soilhealthinstitute.org/our-work/initiatives/>

# Cover crop and soil health technical assistance (CRA, SHI)

- **Goal:** Support state-level commodity organizations and their partners to design and develop state-based Cover Crop and Soil Health Education Programs tailored to regional and local technical assistance needs. State commodity groups can choose from a full suite of educational opportunities including:

## Commodity Staff Resources

- Listening sessions – Virtual and in-person listening sessions with state commodity groups and their partners to solicit feedback and customize training and educational resources to strategically address regional gaps in cover crop and soil health training and knowledge
- Regional Training – 2-day, in-person training workshops for commodity staff and other partners

# Cover crop and soil health technical assistance (CRA, SHI)

## Farmer Resources

- Virtual Trainings/Webinars – Online interactive farmer educational presentation series on cover crops and soil health
- Farmer Videos – Short how-to videos for farmer audiences on cover crops and soil health
- Factsheets – Informational fact sheets on cover crops and soil health for farmers, lenders, and landowners

**ECONOMICS of Soil Health Systems**

**Big Sioux River Watershed of South Dakota**

**FARM SIZE**  
560 acres  
Crescent  
400 acres  
Pasture  
100 acres

**CROPS GROWN**  
Alfalfa, Oats  
200 acres  
Corn, Soybean  
200 acres

**SOIL TEXTURE**  
Silt loam

**SOIL HEALTH MANAGEMENT SYSTEM**  
40+ years certified organic  
Reduced till with cover crops  
Six-year rotation of waterfallo-alfalfa-soybean-corn-soybean  
Cattle and poultry manure for crop nutrients  
Monitoring of soil nutrient levels

**NET INCOME INCREASE**  
Corn  
\$5700/acre  
Soybean  
\$4762/acre

**INTRODUCTION**  
The Aaron Johnson farm in the Big Sioux River Watershed of South Dakota increased profitability with a soil health management system (SHMS) of cover crops and certified organic production that reduced production expenses and expanded marketing opportunities.

**Benefits of the SHMS reported by the farmer:**

- IMPROVED SOIL HEALTH
- LESS WATER & WIND EROSION
- INCREASED ORGANIC MATTER
- ELIMINATION OF COMMERCIAL PESTICIDE AND FERTILISER
- BALANCE OF CROP PESTS AND BENEFICIAL PREDATORS

**ADDITIONAL INFORMATION ON THE FARM IS AVAILABLE IN A REPORT AND VIDEO PRESENTATION AT <https://soilhealthinstitute.org/2018/07/20/economics-of-soil-health/>**

**METHODS**  
The Soil Health Institute conducted an interview to obtain production information for evaluating economics of the soil health system based on partial budget analysis. In this approach, the benefits and costs of a soil health system are assessed by calculating changes in revenue and expenses before and after adoption of that system. The change in net farm income associated with adopting a SHMS is calculated as shown below and presented in Table 1.

**Net change in farm income = Benefits - Costs, where:  
Benefits = Reduced Expenses + Additional Revenue  
Costs = Additional Expenses + Reduced Revenue**

**A DETAILED DESCRIPTION OF THE METHODOLOGY FOR PARTIAL BUDGET ANALYSIS CAN BE FOUND AT <https://soilhealthinstitute.org/methodology/>**

**FINDINGS**  
**Initial Management System and Reduced Expenses**

- The initial management system included conventional inputs without cover crops.
- Eliminating pesticides reduced expenses by \$40.00/acre for corn and \$57.00/acre for soybean.
- Eliminating fertilizers reduced expenses by \$128.00/acre for corn and \$40.00/acre for soybean.
- Post-harvest expenses were reduced due to decreased yields and the associated reduction in costs from hauling, check-off fees, and drying corn.
- Total reduced expenses were \$205.00/acre for corn and \$195.41/acre for soybean.

**SOIL HEALTH INSTITUTE**  
www.soilhealthinstitute.org

**USDA**  
United States Department of Agriculture  
National Conservation Service

**Soil Health Institute**  
The National Conservation Service is a federal agency within the U.S. Department of Agriculture. It is a non-profit organization, not a government agency. It is a non-profit organization, not a government agency. It is a non-profit organization, not a government agency.

Farmer Perspectives on Cover Crops: Cecil Harness from Harness Far...

Watch on YouTube

How to Plant a Cash Crop into a Cover Crop, Including "Planting Green"

**Cover Crop Impact on Herbicide-Resistant Marestalk**

Corn following rye cover crop      Corn with no cover crop

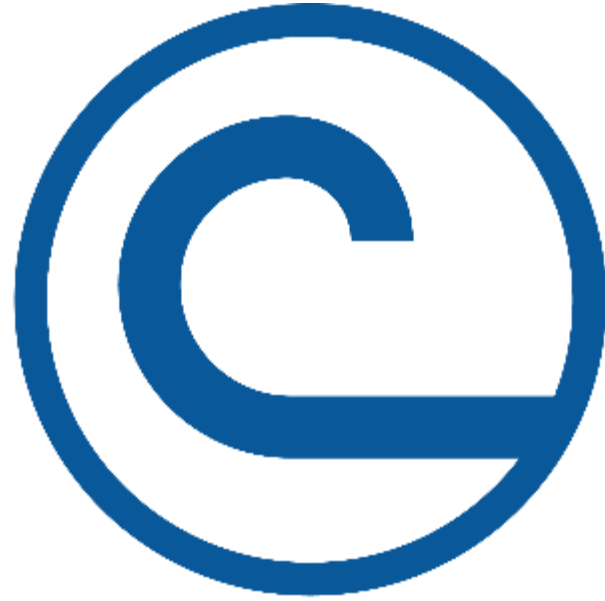
Watch on YouTube

Photo credits: Steve Groff



## 9) Provide additional TA as requested by farmers

- Primary focus of this effort is FSH enrollment and cover crops
- Encourage TA grantees to be responsive to farmer needs and requests, provide additional TA as requested or connect farmers with other TA providers
- In the proposal narrative, describe your approach to responding to additional requests:
  - Resources within your organization, subawards, referral to partners for TA
  - Referrals to other public and private opportunities for FA



# National Association of Conservation Districts

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[www.nacdnet.org](http://www.nacdnet.org)

Learn more at [www.nacdnet.org](http://www.nacdnet.org)  
and on social media @NACDconserve



# CD's & Their State Associations

May be able to be partners

**We encourage you to reach out**

We know that in many states you are already collaborating on other projects

## Timeline

Full Proposal Due Date: **Tuesday, February 28, 11:59 PM ET**

Awards Announced: Late April 2023

# NFWF Contacts

## RFP Questions:

**Bridget Collins**

Program Director

Central Region Working Lands

Phone: 202-595-2655

Email: [Bridget.Collins@nfwf.org](mailto:Bridget.Collins@nfwf.org)

## Application/Easygrants Questions:

**Ernest Newborn**

Coordinator, Regional Programs

Email: [Ernest.Newborn@nfwf.org](mailto:Ernest.Newborn@nfwf.org)

## Technical Assistance / Easygrants Helpdesk:

Email: [Easygrants@nfwf.org](mailto:Easygrants@nfwf.org)

Voicemail: 202-595-2497

Hours: 9:00 am to 5:00 pm ET, Monday-Friday.

Include: your name, proposal ID #, e-mail address, phone number, program you are applying to, and a description of the issue.

